Journal of Behavioral and Experimental Economics 68 (2017) 91–96

Contents lists available at ScienceDirect

Journal of Behavioral and Experimental Economics

journal homepage: www.elsevier.com/locate/jbee

Do higher achievers cheat less? An experiment of self-revealing individual cheating

Gideon Yaniv[a,*], Erez Siniver[b], Yossef Tobol[c]

[a] Ariel University, Ariel, Israel
[b] COMAS, Rishon LeZion, Israel
[c] Jerusalem College of Technology, Jerusalem, Israel, and IZA, Bonn

ARTICLE INFO

Article history:
Received 6 January 2017
Revised 5 April 2017
Accepted 19 April 2017
Available online 22 April 2017

JEL classification:
A22
C91
C92
K42
PsycINFO classification:
2260
2360
3020

Keywords:
Experimental data
Cheating behavior
Intellectual achievement

ABSTRACT

The extensive body of economic and psychological research correlating between students' cheating and their academic grade point average (GPA) consistently finds a significant negative relationship between cheating and the GPA. However, this literature is entirely based on students' responses to direct-question surveys that inquire whether they have ever cheated on their academic assignments. The present paper examines this relationship on the basis of *experimental* data. It reports the results of a two-round experiment designed to expose student cheating at the individual level and correlate it with three intellectual achievement measures: the GPA, the high-school matriculation average grade (MAG) and the psychometric exam score (PES). The experiment involved two classes of third-year economics students incentivized by a competitive reward to answer a multiple-choice trivia quiz without consulting their electronic devices. While this forbiddance was deliberately overlooked in the first round, providing an opportunity to cheat, it was strictly enforced in the second, conducted two months later in the same classes with the same quiz. A comparison of subjects' performance in the two rounds, self-revealed a considerable extent of cheating in the first one. Regressing the individual cheating levels on subjects' gender and their intellectual achievement measures exhibited no significant differences in cheating between males and females. However, cheating of both genders was found to significantly increase with each achievement measure, implying, in sharp contrast with the direct-question surveys, that higher achievers are bigger cheaters.

© 2017 Elsevier Inc. All rights reserved.

1. Introduction

Over the past two decades, behavioral economists and social psychologists have been designing numerous lab and field experiments with the purpose of deriving insights on people's tendency to cheat, incentivizing subjects with monetary payoffs. While there is a wide variety of cheating experiments reported in the literature,[1] the most prominent genre involves a simple task performed by subjects in privacy, such as flipping a coin (e.g., Bucciol and Piovesan, 2011; Houser et al., 2012), rolling a die (e.g., Fischbacher and Foellmi-Heusi, 2013; Arbel et al., 2014) or solving as many as possible simple math exercises in a few-minute time pressure (e.g., Mazar et al., 2008; Grolleau et al., 2014), the outcome of which they are requested to honestly self-report. Being informed about the payoffs associated with each possible outcome, subjects may opt to cheat on their report in favor of the better rewarded outcomes. While experimenters are unable to identify *individual* cheaters beyond reasonable doubt, they can elucidate the aggregate level of cheating among subjects as a group. In the coin-flipping and die-rolling experiments, this is done by comparing the reported outcomes to the statistical distribution of the possible outcomes (50% for heads or tails of a fair coin; 16.7% for each side of a fair die). In the math task experiment, the average outcome reported is compared to that of a control group where subjects' performance is verified by the experimenters rather than self-reported.

There is an extensive body of economic and psychological research correlating between students' cheating and their academic grade point average (GPA). This literature, which is based on students' responses to direct questions regarding whether they have ever cheated on their academic assignments, consistently finds a significant negative relationship between cheating and the GPA (e.g., Bunn et al., 1992; Nowell and Laufer, 1997; Crown and Spiller, 1998; Roig and Caso, 2005; Teixeira and Rocha, 2010). As Bushway and Nash (1977) conclude, "the majority of studies indicate that

* Corresponding author.
E-mail address: gideonyaniv@gmail.com (G. Yaniv).

[1] For a detailed review of the experimental literature on cheating see Rosenbaum et al. (2014).

http://dx.doi.org/10.1016/j.socec.2017.04.005
2214-8043/© 2017 Elsevier Inc. All rights reserved.

students who are lower in school achievement may cheat more frequently" (p. 624). To the best of our knowledge, there is no *experimental* study that has attempted to examine the relationship between cheating and the GPA. To do so, one must be able to identify cheating at the *individual* level. We know of only two studies that have done this. Ward and Beck (1990) informed 128 students who took a multiple-choice midterm exam a few days earlier that due to time pressures examiners had not been able to grade their exams, therefore returning the exams to them for self-grading. Subjects' self-grading was then compared with their actual scores to reveal cheating. Schwieren and Weichselbaumer (2010) asked 65 students to solve, under competitive and non-competitive settings, as many mazes as they could in a maze game offered on Yahoo's website and record their achievements in a table. Subjects' records were then compared with the number of mazes actually solved using a spy-ware program that secretly monitored subjects' performance.

The present paper reports the results of a two-round experiment designed to expose student cheating at the individual level and correlate it with three intellectual achievement measures: the GPA, the high-school matriculation average grade (MAG) and the psychometric exam score (PES). The experiment involved two classes of third-year economics students incentivized by a competitive reward to answer a multiple-choice trivia quiz without consulting with their electronic devices. While this forbiddance was deliberately overlooked in a first round, providing an opportunity to cheat, it was strictly enforced in the second, conducted two months later in the same classes with the same quiz. A comparison of subjects' performance in the two rounds, self-revealed a considerable extent of cheating in the first one. Regressing the individual cheating levels on administrative data of subjects' gender and their intellectual achievement measures exhibited no significant differences in cheating between males and females. However, cheating of both genders was found to significantly increase with each achievement measure, implying, in sharp contrast with the direct-question surveys, that higher achievers are bigger cheaters.

2. The experiment

The experiment involved two (treatment and control) rounds. In the first (treatment) round, we asked two classes of third-year economics students at COMAS (Israel) to answer a trivia quiz of 16 multiple-choice questions. More specifically, each question of the quiz introduced the name of a certain country followed by the names of four cities, one of which was the capital city of that country. The students' task was simply to circle, in each question, the name of the appropriate capital city. The task was not trivial as it may sound, as most of the countries included in the quiz were relatively newly founded, the names of which (not to say the names of their capital cities) subjects had possibly never heard before (see Appendix A).

We asked subjects to write their student identification number at the top of the answer sheet and announced that the 10 subjects to do best in the quiz would be rewarded with a bonus of 5 points to their course grade.[2] We made it clear that the reward reflected our appreciation for personal knowledge, hence subjects were to avoid using their electronic devices (i.e., smart-phones and laptops) in search for the correct answers. We gave subjects 10 min to answer the quiz and left them with a research assistant who deliberately appeared to be deeply engaged with his own smartphone rather than paying attention to others, thereby providing an opportunity for cheating. In particular, subjects who happened to click "capitals of the world" in Google, rather than searching for one country at a time, got several links to lists of capital cities by country's alphabetical order and could easily end up answering correctly all 16 questions in just a few minutes.

In the second (control) round, conducted two months later, we gave the *same* two classes the *same* quiz (though in a different order of questions and answers to blur possible visual memory of their order in the first round), promising the same reward. Only this time, two of us stayed in each class to carefully watch subjects, one in front and one in the back, thereby disabling them from activating their electronic devices. Using student identification numbers to compare their performance in the two rounds, we were able to expose their extent of cheating in the first round on an individual level without identifying them by name or face.[3] Finally, providing our secretariat with a list of identification numbers of students who participated in both rounds, we asked them to write down aside each number the student's gender as well as his/her GPA, MAG and (if available) PES.[4,5] We were then able to match the experimental data on individual cheating with the administrative data on their gender and intellectual achievements.

3. Results

We collected a total of 145 answer sheets in the first round and 135 in the second round. Comparing student identification numbers, we sorted out 125 pairs of answer sheets corresponding to 125 students who participated in both rounds. Table 1 and Figs. 1a and 1b display their performance in the two rounds. As is easily seen, performance fell dramatically in the second round with subjects' failure to activate their electronic devices: the average number of correct answers dropped by 50% from 9.74 to 4.85, the difference in averages being statistically significant ($t = 11.51$, p-value < 0.0001). Of particular interest is the finding that 66 subjects (46.4%) answered correctly 10 and more questions in the first round, whereas only 4 subjects (3.2%) succeeded in doing so in the second. Furthermore, 23 subjects (18.4%) cheated to the maximum level possible (answered correctly all 16 questions), leaving us no choice but to award them all with the promised 5-point bonus. Table 2 and Fig. 2 reveal that 36 subjects (28.8%) exhibited a difference of *at least* 10 correct answers, and 60 subjects (51.2%) of at least 3 correct answers, between their performances in the two rounds.[6]

Table 3 presents the results of regressing subjects' cheating levels, as manifested by the difference in correct answers between the two rounds, on their gender and achievement measures (descriptive statistics for the achievement measures are pro-

[2] It is quite common in the Israeli academia to grant a small number of credit points for fulfilling tasks that do not necessarily reflect academic achievements, e.g., for merely attending the class or for submitting home exercises even though it is well known that most students copy them from the few who bother to do the work. In the present case, one of us who taught two classes of an elective third-year course, Labor Economics, announced at the beginning of the course that at two randomly selected dates during the semester attending students would get the opportunity to gain a bonus to their grades in return for answering a trivia quiz, the results of which were needed for his research. This generated an incentive to attend the class.

[3] While the true purpose of the two-round experiment was not disclosed to students in real time, it was revealed to them a few weeks after the second round, when efficiency wages and the related issues of shirking and cheating at the workplace were discussed. The experiment served to demonstrate that in the absence of effective monitoring, motivated employees might not hesitate to cheat extensively.

[4] The admission criterion for the Economics program at COMAS is either a MAG of at least 85 (in which case a PES is not required) or a lower MAG with a PES of at least 500. The psychometric exam is conducted countrywide several times a year by a central body established by Israeli universities. Candidates who take the exam usually invest a considerable amount of effort in preparation courses. About 70% of COMAS Economics students report a PES, not necessarily because of having a low MAG: a sufficiently high PES may guarantee a scholarship as well as acceptance to the highly-demanded Accounting program.

[5] We also used the list of identification numbers to inform our subjects, after each round, about the number of questions they answered correctly, highlighting

Download English Version:

https://daneshyari.com/en/article/5034103

Download Persian Version:

https://daneshyari.com/article/5034103

Daneshyari.com